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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,827

05/17/2006

Kou Kamada

Q91750

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23373

7590

10/20/2006

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EXAMINER

BLEVINS, JERRY M

ART UNIT

PAPER NUMBER

2883

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/562,827

Applicant(s)

KAMADA, KOU

Examiner

Jerry Martin Blevins

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/30/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4, 5, 7, 10, 11, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Published US Patent Application 2003/0085387 to Fujiyama et al.

Regarding claim 1, Fujiyama teaches a plastic optical fiber comprising a core region having a center line along a longitudinal axis of the fiber, and in any plane perpendicular to the center line, a refractive index of the core region increases along a direction going from a periphery portion to the center line (paragraphs 172-182), and in any plane parallel to the center line and containing the center line, a birefringent index varying along a direction going from the center line to a periphery portion perpendicular to the center line (paragraph 2).

Regarding claim 4, Fujiyama teaches that the core region is formed of a uniform composition (paragraphs 172-182).

Regarding claims 5 and 16, Fujiyama teaches that molecules in the core region are aligned along the longitudinal axis and a degree of the alignment varies along a

Art Unit: 2883

direction going from the center line to a periphery portion perpendicular to the center line (paragraph 112).

Regarding claims 7, 10, and 11, Fujiyama teaches that the light loss is not greater than 250 dB/km (paragraphs 172-182).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, 8, 9, and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiyama in view of US Patent 6,871,000 to Fukuba et al.

Regarding claims 2 and 3, Fujiyama teaches the limitations of the base claim 1. Although Fujiyama teaches that the core region is formed of a material having intrinsic birefringence (paragraph 2), Fujiyama does not explicitly teach that the birefringence is either positive or negative. Fukuba teaches that a core material may have positive or negative birefringence depending on the particular core material, and that either state is desirable as long as the absolute value of the birefringence is within a desirable range (Fukuba, column 7, line 46 – column 8, line 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the birefringent core of Fujiyama with the positive or negative birefringent core, as taught by Fukuba. The

Art Unit: 2883

motivation would have been to strengthen the fiber (Fukuba, column 7, line 46 – column 8, line 3).

Regarding claims 8 and 9, Fujiyama in view of Fukuba renders obvious the limitations of the base claims 2 and 3, respectively. Fujiyama also teaches that the light loss is not greater than 250 dB/km (paragraphs 172-182).

Regarding claims 12 and 13, Fujiyama in view of Fukuba renders obvious the limitations of the base claims 2 and 3, respectively. Fujiyama also teaches that the core region is formed of a uniform composition (paragraphs 172-182).

Regarding claims 14 and 15, Fujiyama in view of Fukuba renders obvious the limitations of the base claims 2 and 3, respectively. Fujiyama also teaches that molecules in the core region are aligned along the longitudinal axis and a degree of the alignment varies along a direction going from the center line to a periphery portion perpendicular to the center line (paragraph 112).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiyama in view of Japanese Patent JP 10-245410.

Regarding claim 6, Fujiyama teaches a process for producing a plastic optical fiber comprising drawing a perform (paragraphs 121 and 138-142) comprising at least one region formed of a material having an intrinsic birefringence (paragraph 2) into the fiber. Fujiyama does not teach at least two zones where a temperature is set to be different from each other thereby creating a temperature difference of 5 degrees Celsius or larger between a center portion and a periphery portion of the perform before the

Art Unit: 2883

perform is drawn into the fiber. JP 10-245410 teaches setting a temperature difference of at least 5 degrees Celsius between two zones in the process of producing a plastic optical fiber (abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to set a temperature difference of at least 5 degrees Celsius between two zones, as taught by JP 10-245410 in the process of Fujiyama. The motivation would have been to ease the process of drawing the perform into the fiber.

Conclusion

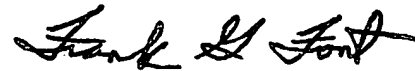
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2883

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMB

A handwritten signature in black ink, appearing to read "Frank G. Font". The signature is fluid and cursive, with the first and last names being more prominent.

Frank G. Font
Supervisory Patent Examiner
Technology Center 2800